

**WASHINGTON DEPARTMENT OF ECOLOGY**  
**ENVIRONMENTAL ASSESSMENT PROGRAM**  
**FRESHWATER MONITORING UNIT**  
**STREAM DISCHARGE TECHNICAL NOTES**

**STATION ID:** 35F050  
**STATION NAME:** Pataha Creek near Mouth  
**WATER YEAR:** 2013  
**AUTHOR:** Mitch Wallace

**Introduction**

Watershed Description

Pataha Creek is a tributary of the Tucannon River. The confluence is approximately one mile downstream from the station. Pataha Creek runs generally northward from its headwaters in the northern Blue Mountains and then turns westward near the communities of Pataha and Pomeroy, where it drains agricultural lands.

Gage Location

The station is located at the Highway 261 crossing of Pataha Creek. It is located within the right-of-way of Highway 261 on the left side, downstream of the highway crossing.

Table 1. Basin Area and Legal Description

Drainage Area (square miles)	170 (Streamstats)
Latitude (degrees, minutes, seconds)	46° 30' 43" N
Longitude (degrees, minutes, seconds)	117° 58' 23" W

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	12
Median Annual Discharge (cfs)	10
Maximum Daily Mean Discharge (cfs)	58
Minimum Daily Mean Discharge (cfs)	2.0
Maximum Instantaneous Discharge (cfs)	64
Minimum Instantaneous Discharge (cfs)	1.5
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	3.4
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	27
Number of Days Discharge is Greater Than Range of Ratings	0
Number of Days Discharge is Less Than Range of Ratings	0
Number of Un-Reported Days	0
Number of Days Qualified as Estimates	110
Number of Modeled Days	0

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

#### Table 2 Discussion (Discharge Statistics)

Estimated days were a result of using a mean filter function to smooth noisy data. This noisy data was created by silt build up near the end of the bubbler o-line. Additionally, the days in which the mean daily flows between corrected and uncorrected data were greater than 20 percent were also qualified as estimates.

Peak flow occurred on April 8, 2013. The lowest flow of the year occurred in late August 2013.

Table 3. Error Analysis Summary.

Potential Logger Drift Error (% of discharge)	8.2
Potential Weighted Rating Error (% of discharge)	10.6
Total Potential Error (% of discharge)	18.8

Table 3 Discussion (Error Analysis)

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Table 4. Stage Record Summary

Minimum Recorded Stage (feet)	8.57
Maximum Recorded Stage (feet)	10.27
Range of Recorded Stage (feet)	1.70

Table 4 Discussion (Stage Record)

A large portion of the stage data collected during the summer was very noisy due to silt build up in the gage pool. The data was run through a filter to smooth out the noise.

Table 5. Rating Table Summary

Rating Table No.	21		
Period of Ratings	10/01/12 to 9/30/13		
Range of Ratings (cfs)	1.4 to 252		
No. of Defining Measurements	18		
Rating Error (%)	10.6		

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

Table 5 Discussion (Rating Tables)

Eight discharge measurements were taken throughout the water year, ranging from 3.0 to 48 cfs.

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	n/a
Range of Modeled Stage (feet)	
Range of Modeled Discharge (cfs)	
Valid Period for Model	
Model Confidence	

Table 6 Discussion (Modeled Data)

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Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date
n/a	n/a

Table 7 Discussion (Surveys)

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Activities Completed

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